



Date: October 15, 2004

**GM-664 (PE04-061)**

**On The Cover:**

GM Assigned IR Number  
NHTSA Assigned Evaluation Number  
Number of Books  
Allegation Title, Model Year and Make  
Date Received from NHTSA  
GM Reply Date

**Book 1:**

Tab (1).....GM Response Letter to NHTSA  
Tab (2)..... NHTSA Letter  
Tab (3)..... Attachment 1 with (1) CD  
Tab (4)..... Attachment 2 with (1) CD  
Tab (5)..... Attachment 3 with confidential material removed and  
sent to the Office of Chief Counsel  
Tab (6)..... Attachment 4 with confidential material removed and  
sent to the Office of Chief Counsel

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OFFICE OF  
INVESTIGATION



**GENERAL MOTORS NORTH AMERICA**  
**Structure & Safety Integration**

October 14, 2004

Thomas Z. Cooper, Chief  
Vehicle Integrity Division  
Office of Defects Investigation  
NHTSA Safety Assurance  
Room #5326  
400 Seventh Street, S.W.  
Washington, D.C. 20590

GM-664

NVS-212mj/  
PE04-061

Dear Mr. Cooper:

This letter is General Motors' (GM's) response to your information request (IR), dated September 2, 2004, regarding allegations of failure or malfunction of the turn signals in model year (MY) 2003 and 2004 Saturn Ion vehicles.

Per a telephone conversation with Michael Lee of NHTSA, GM's response is limited to the front turn signals/daytime running lamps (DRL)- with the exception of the rear turn signal lamp part sales requested in question 11.

Your questions and our corresponding replies are as follows:

1. State, by model, model year and body type (i.e., sedan and coupe), the number of subject vehicles GM has manufactured for sale or lease in the United States. Separately, for each subject vehicle manufactured to date by GM, state the following:
  - a. Vehicle Identification number (VIN);
  - b. Make;
  - c. Model;
  - d. Model Year;
  - e. Date of manufacture;
  - f. Date warranty coverage commenced; and
  - g. The State in the United States where the vehicle was originally sold or leased (or delivered for sale or lease).

Provide the table in Microsoft Access 2000, or a compatible format, entitled "PRODUCTION DATA."

GM is providing the number of subject vehicles produced for sale or lease in the United States by model and model year in Table 1 below:

MAKE/ MODEL/ BODY TYPE	2003 MY	2004 MY	TOTAL
Saturn Ion Coupe	12,058	30,727	42,785
Saturn Ion Sedan	95,733	101,678	197,311
Total	107,791	132,305	240,096

TABLE 1 VEHICLE PRODUCTION

The production information requested in 1a-1g is provided on the CD labeled Attachment 1; refer to the Microsoft Access 2000 file in the folder labeled "Response to Q1". The GM database that contains Vehicle Identification Number (VIN) information does not include information on the state where an individual vehicle was sold. GM is providing the state where the vehicle was shipped in response to request 1g. For some of the subject vehicles, which have incomplete warranty files, the GM warranty system does not contain a warranty start date or state where the vehicle was shipped and therefore these fields are blank.

- 2. State the number of each of the following, received by GM, or of which GM is otherwise aware, which relate to, or may relate to, the alleged defect in the subject vehicles:**
- a. Consumer complaints, including those from fleet operators;**
  - b. Field reports, including dealer field reports;**
  - c. Reports involving a crash, injury, or fatality, based on claims against the manufacturer involving a death or injury, notices received by the manufacturer alleging or proving that a death or injury was caused by a possible defect in a subject vehicle, property damage claims, consumer complaints, or field reports;**
  - d. Property damage claims;**
  - e. Third-party arbitration proceedings where GM is or was a party to the arbitration; and**
  - f. Lawsuits, both pending and closed, in which GM is or was a defendant or codefendant.**

For subparts "a" through "f," state the total number of each item (e.g., consumer complaints, field reports, etc.) separately. Multiple incidents involving the same vehicle are to be counted separately. Multiple reports of the same incident are also to be counted separately (i.e., a consumer complaint and a field report involving the same incident in which a crash occurred are to be counted as a crash report, a field report and a consumer complaint).

In addition, for items "c" through "f," provide a summary description of the alleged problem and causal and contributing factors and GM's assessment of the problem, with a summary of the significant underlying facts and evidence. For items "e" and "f," identify the parties to the action, as well as the caption, court, docket number, and date on which the complaint or other document initiating the action was filed.

Table 2-1 below summarizes records that could relate to the subject condition.

TYPE OF REPORT	COUNT (INCLUDING DUPLICATES)	GM REPORTS	GM REPORTS CORRESPONDING TO NHTSA REPORTS	LOCATION OF REPORTS (ATTACHMENT)	NUMBER WITH PROPERTY DAMAGE	NUMBER WITH CRASH	NUMBER WITH INJURIES/FATALITIES*	NUMBER WITH FIRE
Owner Reports	830	824	6	2A	0	1	0	0
Field Reports & Technical Assistance System Reports	360	358	2	2B	0	0	0	0
Not-In-Suit Claims	0	0	-	-	-	-	-	-
Subrogation Claims	0	0	-	-	-	-	-	-
Third Party Arbitration Proceedings	0	0	-	-	-	-	-	-
Product Liability Lawsuits	0	0	-	-	-	-	-	-
Total (Including Duplicates)	1190 (988 sedan, 191 coupe)	1182	8	-	0	1	0	0
Total (Excluding Duplicates)	1163 (966 sedan, 186 coupe)	1146	7	-	0	1	0	0

TABLE 2-1: REPORT BREAKDOWN

N/A Not Applicable

\* GM is not aware of any injuries or fatalities related to the subject condition.

The sources of the requested information and the last date the searches were conducted are tabulated in Table 2 below.

SOURCE SYSTEM	LAST DATE GATHERED
Corporate Central File	9/13/2004
Customer Assistance Center	9/09/2004
Technical Assistance Center	9/08/2004
Field Information Network Database (FIND)	9/13/2004
Company Vehicle Evaluation Program (CVEP)	9/08/2004
Captured Test Fleet (CTF)	9/08/2004
Early Quality Feedback (EQF)	9/13/2004
Field Product Report Database (FPRD)	9/13/2004
Legal / Employee Self Insured Services (ESIS)	9/02/2004

TABLE 2-2: DATA SOURCES

3. Separately, for each item (complaint, report, claim, notice, or matter) within the scope of your response to Request No. 2, state the following information:
- GM's file number or other identifier used;
  - The category of the item, as identified in Request No. 2 (i.e., consumer complaint, field report, etc.);
  - Vehicle owner or fleet name (and fleet contact person), address, and telephone number;
  - Vehicle's VIN;
  - Vehicle's make, model and model year;
  - Vehicle's mileage at time of incident;
  - Incident date;
  - Report or claim date;
  - Whether a crash is alleged;
  - Whether a fire is alleged;
  - Whether property damage is alleged;
  - Number of alleged injuries, if any; and
  - Number of alleged fatalities, if any.

Provide this information in Microsoft Access 2000, or a compatible format, entitled "REQUEST NUMBER TWO DATA."

An electronic summary of the records included in request 2 is provided on the Attachment 1 CD; refer to the Microsoft Access 2000 folder labeled "Response to Q3".

4. Produce copies of all documents related to each item within the scope of Request No. 2. Organize the documents separately by category (i.e., consumer complaints, field reports, etc.) and describe the method GM used for organizing the documents.

Copies of the records identified in request 2 are provided on the Attachment 1 CD; refer to the Microsoft Access 2000 folder labeled "Response to Q3". The records are viewable by accessing the "Document" and "Attachments" columns.

5. State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by GM to date that relate to, or may relate to, the alleged defect in the subject vehicles: warranty claims; extended warranty claims; claims for good will services that were provided; field, zone, or similar adjustments and reimbursements; and warranty claims or repairs made in accordance with a procedure specified in a technical service bulletin or customer satisfaction campaign.

Separately, for each such claim, state the following information:

- GM's claim number;
- Vehicle owner or fleet name (and fleet contact person) and telephone number;
- VIN;
- Repair date;
- Vehicle mileage at time of repair;
- Repairing dealer's or facility's name, telephone number, city and state or ZIP code;
- Labor operation number;

- h. Problem code;
- i. Replacement part number(s) and description(s);
- j. Concern stated by customer; and
- k. Comment, if any, by dealer/technician relating to claim and/or repair.

Provide this information in Microsoft Access 2000, or a compatible format, entitled "WARRANTY DATA."

The regular warranty claims and extended warranty claims for the subject vehicles that may be responsive to this request, are summarized by model, model year, and body type in Table 5-1 and Table 5-2. A summary of these warranty claims is provided on the Attachment 1 CD; refer to the folder labeled "Response to Q5". Some of the warranty claims included on the CD may not be related to the alleged defect as explained in response to Item 6. There were no Universal Warranty Corporation (UWC) claims found.

Many of the VINs have multiple entries for various labor codes. The warranty claims reflect the number of labor operations used by dealers, which is considerably higher than the number of actual visits to dealers for repairs.

SATURN ION	2003MY	2004MY
Coupe	3,647	464
Sedan	64,884	27,472

TABLE 5-1: REGULAR WARRANTY CLAIMS

SATURN ION	2003MY	2004MY
Coupe	1	1
Sedan	179	32

TABLE 5-2: MIC EXTENDED WARRANTY CLAIMS

The sources of the requested information and the last date the searches were conducted are tabulated in Table 5-3 below.

SOURCE SYSTEM	LAST DATE GATHERED
GM Saturn Field Product Reporting (FPR- regular warranty)	9/09/2004
Motors Insurance Corporation (MIC - extended warranty)	9/09/2004
Universal Warranty Corporation (UWC - extended warranty)	9/28/2004

TABLE 5-3: DATA SOURCES

The MIC extended warranty system does not contain the following information: repairing dealer code, vehicle owner information, trouble code, trouble code description, part number, part description or verbalism.

The warranty data provided has limited analytical value in analyzing the field performance of a motor vehicle component. The warranty records do not contain sufficient information to establish the condition of the part at the time of the warranty correction; and service personnel may not consistently use the appropriate labor and trouble codes. Warranty numbers represent

claims by our dealers for reimbursement for parts and labor costs incurred in performing warranty service for our customers.

6. Describe in detail the search criteria used by GM to identify the claims identified in response to Request No. 5, including the labor operations, problem codes, part numbers and any other pertinent parameters used. Provide a list of all labor operations, labor operation descriptions, problem codes, and problem code descriptions applicable to the alleged defect in the subject vehicles. State, by make and model year, the terms of the new vehicle warranty coverage offered by GM on the subject vehicles (i.e., the number of months and mileage for which coverage is provided and the vehicle systems that are covered). Describe any extended warranty coverage option(s) that GM offered for the subject vehicles and state by option, model, and model year, the number of vehicles that are covered under each such extended warranty.

The GM Saturn warranty database, FPR, was searched using the following criteria:

- 1) The 6 labor codes shown in Table 6 below,
- 2) Any labor code between B0000-B9999 or N0000-N9999 and the complaint codes listed in the file called "Complaint Code.doc", found in the folder "Response to Q6" on the Attachment 1 CD,
- 3) Any labor code between B0000-B9999 or N0000-N9999 and the word "bulb", or
- 4) The case type codes and the part numbers listed in the file called "Case type & part numbers.doc" found in the folder Response to Q6 on the Attachment 1 CD.

The majority of claims in the Saturn warranty database have verbatims. Since the search criteria were very broad, each verbatim was reviewed to determine if it was responsive to this investigation.

As stated in response to question 5, many of the VINs have multiple entries for various labor codes. The warranty claims reflect the number of labor operations used by dealers, which is considerably higher than the number of actual visits to dealers for repairs.

LABOR CODE	LABOR CODE DESCRIPTION
N0357	RESISTOR DAYTIME RUNNING LIGHTS-REPLACE
N0680	BULBS, RIGHT-PARK&TURN SIGNAL LAMP-REPLACE
N0681	BULBS, LEFT-PARK&TURN SIGNAL LAMP-REPLACE
N0760	BULBS, RIGHT-STOP,TAILETURN LAMP-REPLACE
N0761	BULBS, LEFT-STOP,TAILETURN LAMP-REPLACE
N8116	WIRING AND/OR CONNECTOR, CIGARETTE LIGHTER-REPLACE

TABLE 6

The MIC extended warranty data was collected by searching the labor codes found in the file named "extended warranty labor codes" in the folder "Response to Q6" on the Attachment 1 CD. UWC extended warranty data was searched for the labor code description "Enhanced Electrical Miscellaneous".

Due to the generality of some of the GM labor code description categories regarding the specific component repaired or replaced under that labor code, some of the warranty claim records provided in response to item 5 may not be related to failure of the turn signal/ brake/ tail lamp bulb to illuminate. For example, labor code "N0912 - Socket, Lamp Exterior - Replace" is not only used for warranty claims in which the rear lamp socket is replaced but the same labor code is also used for replacement of other exterior bulb sockets such as those for headlamps, daytime running lamps, front turn signal lamps, and parking lamps.

The subject vehicles are covered by a bumper-to-bumper new vehicle warranty for three years or 36,000 miles whichever occurs first. Many different extended warranty options are available through GM dealerships. They are offered at different prices and for varying lengths of time, based on customer's preference, up to 7 years from the date of purchase or up to a total of 100,000 vehicle miles. The General Motor's warranty system does not contain information on the number of vehicles that have extended warranty coverage.

7. Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles, that GM has issued to any dealers, regional or zone offices, field offices, fleet purchasers, or other entities. This includes, but is not limited to, bulletins, advisories, informational documents, training documents, or other documents or communications, with the exception of standard shop manuals. Also include the latest draft copy of any communication that GM is planning to issue within the next 120 days.

The bulletins that have been issued by GM that relate to, or may be related to, failure of the turn signal/DRL bulb to illuminate on the subject vehicles are identified in Table 7. A copy of each bulletin identified in Table 7 is included on the Attachment 1 CD; refer to the folder labeled "Response to Q7".

DOCUMENT I.D.	DOCUMENT TITLE	ISSUE DATE
1455934 (sedan only)	Turn Signal Indicator Flashing Faster than Normal and Corresponding Front Turn Signal Bulb Inoperative #04-08-42-002	2/06/2004
1530890 (coupe, sedan)	Erratic Front Turn Signal Operation When Using a Cell Phone Charger in Either Accessory Power Outlet #03-08-42-008A	8/24/2004

TABLE 7 BULLETINS

8. Describe all assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and/or evaluations (collectively, "actions") that relate to, or may relate to, the alleged defect in the subject vehicles that have been conducted, are being conducted, are planned, or are being planned by, or for, GM. For each such action, provide the following information:

- Action title or identifier;
- The actual or planned start date;



- c. The actual or expected end date;
- d. Brief summary of the subject and objective of the action;
- e. Engineering group(s)/supplier(s) responsible for designing and for conducting the action; and
- f. A brief summary of the findings and/or conclusions resulting from the action.

For each action identified, provide copies of all documents related to the action, regardless of whether the documents are in interim, draft, or final form. Organize the documents chronologically by action.

The information listed in Table 8 below is a summary of actions performed by GM regarding the alleged defect on the subject vehicles. The documents are provided as specified per action.

**Action title:** PRTS+ N117173

**Start Date:** 10/11/2002

**End Date:** 7/27/2004, re-opened under PRTS+ N184358

**Engineering Group:** GM, Guide Corp., Federal Mogul

**Attachment 2 CD, Response to Q8, Attachment 8A**

**Attachment 3 CD, GM Confidential, Response to Q8- confidential, Attachment 8A**

**Description:** The warranty claims rate for the low front turn signal / daytime running lamp bulb is higher than the previous model. Note: the DRL for the previous model was the headlamp high beam.

**Summary of Action:** Requested returned parts for analysis. Supplier analyzed returned parts and internal scrap. Supplier determined that the bulb assembly process caused micro-fractures to the bulb while mating the bulb base to the bulb body. Revised fixture block and bulb sleeve to reduce potential of cracking bulb base.

**Action title:** Warranty analysis/ Product Improvement

**Start Date:** 10/11/2002

**End Date:** on-going

**Engineering Group:** GM, Guide Corp., Federal Mogul

**Attachment 2 CD, Response to Q8, Attachment 8B**

**Attachment 3 CD, GM Confidential, Response to Q8- confidential, Attachment 8B**

**Attachment 4 CD, Guide Confidential, Response to Q8- confidential, Attachment 8B**

**Description:** Examine the sedan turn signal bulb, socket, and assembly design and assembly process to reduce bulb related warranty.

**Summary of Action:** Investigating alternative materials, designs, assembly processes, suppliers, and development of a more comprehensive test, known as SAE/USCAR15.

**Action title:** PRTS+ N122482

**Start Date:** 5/09/2003

**End Date:** on-going

**Engineering Group:** GM, Valeo

**Attachment 2 CD, Response to Q8, Attachment 8C**

**Attachment 3 CD, GM Confidential, Response to Q8- confidential, Attachment 8C**

**Description:** Front turn signals inoperative when using the auxiliary power outlet (cigarette lighter).

**Summary of Action:** Analysis determined that there were noise emissions generated by certain cell phones and chargers corrupting the sense feedback line to the front turn signal driver. The cell phone emissions exceeded the validation test requirements. The noise could not be filtered out without reducing the chance of finding a true fault from the turn signal. Based on this analysis, a new driver that uses an analog fault will be introduced to correct the issue.

<p><b>Action title:</b> PRTS+ N147602  <b>Start Date:</b> 10/01/2003  <b>End Date:</b> ongoing  <b>Engineering Group:</b> GM, Guide Corp., Federal Mogul  <b>Attachment 2 CD, Response to Q8, Attachment 8D</b>  <b>Attachment 3 CD, GM Confidential, Response to Q8- confidential, Attachment 8A</b>  <b>Description:</b> Technician feedback on turn signal / DRL bulb inoperative. Finding the bulb collar, socket, or harness melted.  <b>Summary of Action:</b> Red X analysis determined heat to be the root cause. The operating temperature range at the turn signal/ DRL cavity exceeded the socket material specifications for the sedan front light assembly.  Changed the socket material from Grivory to Zenite. Also, voltage to the turn signal /DRL bulb was reduced by 1.0 volt on sedans only to reduce heat buildup. Additional documentation regarding the voltage decrease can be found in the Response to Q9 attachments. Identified a warranty issue: the entire headlamp assembly has to be replaced because the headlamp/ turn signal wiring harness could not be ordered as a separate part.</p>
<p><b>Action title:</b> PRTS+ N164358  <b>Start Date:</b> 7/27/2004  <b>End Date:</b> on-going  <b>Engineering Group:</b> GM, Guide Corp., Federal Mogul  <b>Attachment 2 CD, Response to Q8, Attachment 8E</b>  <b>Description:</b> Warranty review after implementation of Zenite socket revealed no improvement. The front turn signal /DRL functions intermittently.  <b>Summary of Action:</b> Found that the Guide (Zenite) socket is out of specification. Further investigation found that when the parts are assembled into the wiring harness, the bulb retention feature dimension was changed during the potting process by the holding fixture. The fixtures and process was revised.</p>

TABLE 8

9. Produce copies of all schematics and circuit diagrams for the subject components along with description and specifications of each component. Also, provide a technical description and component specifications for the "jumper harness" that is referenced in GM's Technical Service Bulletin No. 04-08-42-002, dated February 2004.

The schematics and circuit diagrams for the subject components can be found on the Attachment 2 CD; refer to the folder labeled "Response to Q9".

The jumper harness referenced in GM's Technical Service Bulletin No. 04-08042-002, dated February 2004, is intended to introduce a fixed amount of additional resistance in the electrical circuit supplying voltage to the Turn Signal / DRL lamp. This fixed resistance provides a drop in the amount of applied voltage to the Turn Signal / DRL lamp.

The jumper harness consists of three connectors, one to connect to the lamp assembly, a second to connect to the vehicle wiring harness, and a third to connect to a voltage dropping resistor. The dropping resistor provides a nominal resistance of 310 milli-ohms.

10. Describe all modifications or changes made by, or on behalf of, GM in the design, material composition, manufacture, quality control, supply, or installation of the subject

components, from the start of production to date, which relate to, or may relate to, the alleged defect in the subject vehicles. For each such modification or change, provide the following information:

- a. The date or approximate date on which the modification or change was incorporated into vehicle production;
- b. A detailed description of the modification or change;
- c. The reason(s) for the modification or change;
- d. The part numbers (service and engineering) of the original component;
- e. The part number (service and engineering) of the modified component;
- f. Whether the original unmodified component was withdrawn from production and/or sale, and if so, when;
- g. When the modified component was made available as a service component; and
- h. Whether the modified component can be interchanged with earlier production components.

Also, provide the above information for any modification or change that GM is aware of which may be incorporated into vehicle production within the next 120 days.

The modification information responsive to items 10 a-h is summarized on the Attachment 1 CD; refer to the folder labeled "Response to Q10".

11. State the number of each of the following that GM has sold that may be used in the subject vehicles by component name, part number (both service and engineering/production), model and model year of the vehicle in which it is used and month/year of sale (including the cut-off date for sales, if applicable):
  - a. Front turn signal lamps;
  - b. Rear turn signal lamps; and
  - c. Any kits that have been released, or developed, by GM for use in service repairs to the front and/or rear turn signal lamps.

For each component part number, provide the supplier's name, address, and appropriate point of contact (name, title, and telephone number). Also identify by make, model and model year, any other vehicles of which GM is aware that contain the identical component, whether installed in production or in service, and state the applicable dates of production or service usage.

An electronic summary table of the requested service part information for the subject component is provided on the Attachment 1 CD; refer to the Microsoft Excel file in the folder labeled "Response to Q11". The bulb is also used on the Saturn L100, L200, and L300 vehicles for 2003MY to present. The summary table lists parts for use in service repairs to the front and /or rear turn signal lamps. Some of these parts are also used on other vehicles, as noted on the table.

Monthly service part sales are available for the past 24 months. These sales numbers represent total sales to dealers worldwide. This data has limited analytical value in analyzing the field performance of a motor vehicle component because the records do not contain sufficient information to establish the reason for the part sale. It is not possible from this data to determine the number of these parts that have been installed in the subject vehicles or the number remaining in dealer or replacement part supplier inventory.

**12. Furnish GM's assessment of the alleged defect in the subject vehicles, including:**

- a. The causal or contributory factor(s);
- b. The failure mechanism(s);
- c. The failure mode(s);
- d. The risk to motor vehicle safety that it poses;
- e. What warnings, if any, the operator and the other persons both inside and outside the vehicle would have that the alleged defect was occurring or subject component was malfunctioning; and
- f. The reports included with this inquiry.

The Saturn Ion coupe and sedan have unique front lighting assemblies. Although the same turn signal/DRL bulb is used for both vehicles, the coupe turn signal/DRL socket and wiring harness is designed and manufactured by a different supplier than the sedan assembly.

The failure modes have been identified as an intermittent or inoperative front turn signal/DRL on the 2003-2004MY Saturn Ion vehicles:

The contributory factors for each of the failure modes listed above are:

- 1) Bulb micro-fractures (cracks in the bulb glass) may be a result of damage caused by high insertion forces, mishandling, different thermal expansion coefficient between the bulb wire and the bulb glass, or the bulb sleeve mating to the glass.
- 2) Intermittent contact between the bulb wire and socket may be a result of wire bend inconsistencies, loose bulb to socket fit, or burnt socket contacts/bulb wires due to arcing.
- 3) Deformed sockets as a result of heat build up that exceeds the thermal limitations of the socket material.
- 4) The fault feedback circuit which communicates to the front turn signal driver cannot distinguish between some cell phone/ charger induced electrical noise and an actual fault (a turn signal bulb is out).

The failure mechanisms for the failure modes listed above are:

- 1) When the filament is energized and there is a leak or loose glass debris present in the bulb, the bulb may discolor and become inoperative.
- 2) Vehicle vibrations can cause intermittent contact / arcing.
- 3) Heat build up in the closed lamp cavity of the sedan headlamp assembly.
- 4) Excessive electrical noise emissions produced by some cell phone and chargers interrupts the function of the front turn signal.

There is indication to the driver of an inoperative front turn signal/ DRL bulb. When the front turn signal bulb is non-functional, the driver is notified on activation of the turn signal indicator, as required by FMVSS 108. The turn signal indicator arrow flashes and the audible feedback cycles significantly faster than usual. This feature is described in the owner's manual. Another indication reported by a customer was that he noticed the turn signal bulb did not flash when he used the key fob to unlock the doors.

GM has made available to its dealers service instructions that will assure that customers' vehicles are repaired effectively and minimize the likelihood of repeat failures.

There are no reports of injury as a result of an alleged inoperative turn signal/ DRL.

The 13 reports included with this inquiry may have resulted from the contributory factors noted above. GM has not examined the parts that are the subject of the reports; therefore, GM has not identified the specific contributory factors related to each of the complaints.

GM is continuing its investigation on this issue.

\* \* \*

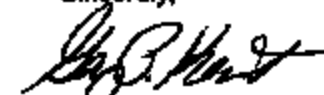
This response is based on searches of General Motors Corporation (GM) locations where documents determined to be responsive to your request would ordinarily be found. As a result, the scope of this search did not include, nor could it reasonably include, "including all of their divisions, subsidiaries (whether or not incorporated) and affiliated enterprises and all of their headquarters, regional, zone and other offices and their employees, and all agents, contractors, consultants, attorneys and law firms and other persons engaged directly or indirectly (e.g., employee of a consultant) by or under the control of GM (including all business units and persons previously referred to), who are or, in or after 2002, were involved in any way with any of the following related to the alleged defect in the subject vehicles:

- a. "Design, engineering, analysis, modification or production (e.g. quality control);
- b. "Testing, assessment or evaluation;
- c. "Consideration, or recognition of potential or actual defects, reporting, record-keeping and information management, (e.g., complaints, field reports, warranty information, part sales), analysis, claims, or lawsuits; or
- d. "Communication to, from or intended for zone representatives, fleets, dealers, or other field locations, including but not limited to people who have the capacity to obtain information from dealers."

This response was compiled and prepared by this office upon review of the documents produced by various GM locations, and does not include documents generated or received at those GM locations subsequent to their searches.

Please contact me if you require further information about this response or the nature or scope of our searches.

Sincerely,



Gay P. Kent

Director

Product Investigations

Attachments



U.S. Department  
of Transportation  
**National Highway  
Traffic Safety  
Administration**

SEP 2 2004

400 Seventh Street, S.W.  
Washington, D.C. 20590

*GM-664*  
*Mary Kacelnik*

*9-13-04*

*Original*  
*4 VDO's Received*

NVS-212mj  
PE04-061

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Gay P. Kent, Director  
Product Investigations, Structure and Safety Integration  
General Motors Corporation  
Mail Code: 480-111-E18  
30200 Mound Road  
Warren, MI 48090-9010

Dear Ms. Kent:

This letter is to inform you that the Office of Defects Investigation (ODI) of the National Highway Traffic Safety Administration (NHTSA) has opened a Preliminary Evaluation (PE04-061) to investigate allegations of turn signal failure in model year (MY) 2003 and 2004 Saturn Ion vehicles manufactured by General Motors Corporation, and to request certain information.

This office has received 13 reports of alleged turn signal failure in MY 2003 and 2004 Saturn Ion vehicles. A copy of each of the reports is enclosed for your information.

Unless otherwise stated in the text, the following definitions apply to these information requests:

- **Subject vehicles:** All MY 2003 and 2004 Saturn Ion vehicles manufactured for sale or lease in the United States.
- **Subject components:** Any or all components of the electrical circuits for the headlights, daytime running lights, front turn signal lamps, and rear turn signal lamps.
- **GM:** General Motors Corporation, all of its past and present officers and employees, whether assigned to its principal offices or any of its field or other locations, including all of their divisions, subsidiaries (whether or not incorporated) and affiliated enterprises and all of their headquarters, regional, zone and other offices and their employees, and all agents, contractors, consultants, attorneys and law firms and other persons engaged directly or indirectly (e.g., employee of a consultant) by or under the control of GM (including all business units and persons previously referred to), who are or, in or after 2002, were involved in any way with any of the following related to the alleged defect in the subject vehicles:



DOT AUTO SAFETY HOTLINE  
888-DASH-2-DOT  
888-327-4238

- a. Design, engineering, analysis, modification or production (e.g. quality control);
  - b. Testing, assessment or evaluation;
  - c. Consideration, or recognition of potential or actual defects, reporting, record-keeping and information management, (e.g., complaints, field reports, warranty information, part sales), analysis, claims, or lawsuits; or
  - d. Communication to, from or intended for zone representatives, fleets, dealers, or other field locations, including but not limited to people who have the capacity to obtain information from dealers.
- **Alleged defect:** Any alleged turn signal failure or malfunction.
  - **Document:** "Document(s)" is used in the broadest sense of the word and shall mean all original written, printed, typed, recorded, or graphic matter whatsoever, however produced or reproduced, of every kind, nature, and description, and all non-identical copies of both sides thereof, including, but not limited to, papers, letters, memoranda, correspondence, communications, electronic mail (e-mail) messages (existing in hard copy and/or in electronic storage), faxes, mailgrams, telegrams, cables, telex messages, notes, annotations, working papers, drafts, minutes, records, audio and video recordings, data, databases, other information bases, summaries, charts, tables, graphics, other visual displays, photographs, statements, interviews, opinions, reports, newspaper articles, studies, analyses, evaluations, interpretations, contracts, agreements, jottings, agendas, bulletins, notices, announcements, instructions, blueprints, drawings, as-builts, changes, manuals, publications, work schedules, journals, statistical data, desk, portable and computer calendars, appointment books, diaries, travel reports, lists, tabulations, computer printouts, data processing program libraries, data processing inputs and outputs, microfilms, microfiches, statements for services, resolutions, financial statements, governmental records, business records, personnel records, work orders, pleadings, discovery in any form, affidavits, motions, responses to discovery, all transcripts, administrative filings and all mechanical, magnetic, photographic and electronic records or recordings of any kind, including any storage media associated with computers, including, but not limited to, information on hard drives, floppy disks, backup tapes, and zip drives, electronic communications, including but not limited to, the Internet and shall include any drafts or revisions pertaining to any of the foregoing, all other things similar to any of the foregoing, however denominated by GM, any other data compilations from which information can be obtained, translated if necessary, into a usable form and any other documents. For purposes of this request, any document, which contains any note, comment, addition, deletion, insertion, annotation, or otherwise comprises a non-identical copy of another document shall be treated as a separate document subject to production. In all cases where original and any non-identical copies are not available, "document(s)" also means any identical copies of the original and all non-identical copies thereof. Any document, record, graph, chart, film or photograph originally produced in color must be provided in color. Furnish all documents whether verified by GM or not. If a document is not in the English language, provide both the original document and an English translation of the document.

- **Other Terms:** To the extent that they are used in these information requests, the terms "claim," "consumer complaint," "dealer field report," "field report," "fire," "fleet," "good will," "make," "model," "model year," "notice," "property damage," "property damage claim," "rollover," "type," "warranty," "warranty adjustment," and "warranty claim," whether used in singular or in plural form, have the same meaning as found in 49 CFR 579.4.

In order for my staff to evaluate the alleged defect, certain information is required. Pursuant to 49 U.S.C. § 30166, please provide numbered responses to the following information requests. Insofar as GM has previously provided a document to ODI, GM may produce it again or identify the document, the document submission to ODI in which it was included and the precise location in that submission where the document is located. When documents are produced, the documents shall be produced in an identified, organized manner that corresponds with the organization of this information request letter (including all individual requests and subparts). When documents are produced and the documents would not, standing alone, be self-explanatory, the production of documents shall be supplemented and accompanied by explanation.

Please repeat the applicable request verbatim above each response. After GM's response to each request, identify the source of the information and indicate the last date the information was gathered.

1. State, by model, model year and body type (i.e., sedan and coupe), the number of subject vehicles GM has manufactured for sale or lease in the United States. Separately, for each subject vehicle manufactured to date by GM, state the following:
  - a. Vehicle identification number (VIN);
  - b. Make;
  - c. Model;
  - d. Model Year;
  - e. Date of manufacture;
  - f. Date warranty coverage commenced; and
  - g. The State in the United States where the vehicle was originally sold or leased (or delivered for sale or lease).

Provide the table in Microsoft Access 2000, or a compatible format, entitled "PRODUCTION DATA."

2. State the number of each of the following, received by GM, or of which GM is otherwise aware, which relate to, or may relate to, the alleged defect in the subject vehicles:
  - a. Consumer complaints, including those from fleet operators;
  - b. Field reports, including dealer field reports;
  - c. Reports involving a crash, injury, or fatality, based on claims against the manufacturer involving a death or injury, notices received by the manufacturer alleging or proving that a death or injury was caused by a possible defect in a subject vehicle, property damage claims, consumer complaints, or field reports;
  - d. Property damage claims;



- e. Third-party arbitration proceedings where GM is or was a party to the arbitration; and
- f. Lawsuits, both pending and closed, in which GM is or was a defendant or codefendant.

For subparts "a" through "f," state the total number of each item (e.g., consumer complaints, field reports, etc.) separately. Multiple incidents involving the same vehicle are to be counted separately. Multiple reports of the same incident are also to be counted separately (i.e., a consumer complaint and a field report involving the same incident in which a crash occurred are to be counted as a crash report, a field report and a consumer complaint).

In addition, for items "c" through "f," provide a summary description of the alleged problem and causal and contributing factors and GM's assessment of the problem, with a summary of the significant underlying facts and evidence. For items "e" and "f," identify the parties to the action, as well as the caption, court, docket number, and date on which the complaint or other document initiating the action was filed.

3. Separately, for each item (complaint, report, claim, notice, or matter) within the scope of your response to Request No. 2, state the following information:
  - a. GM's file number or other identifier used;
  - b. The category of the item, as identified in Request No. 2 (i.e., consumer complaint, field report, etc.);
  - c. Vehicle owner or fleet name (and fleet contact person), address, and telephone number;
  - d. Vehicle's VIN;
  - e. Vehicle's make, model and model year;
  - f. Vehicle's mileage at time of incident;
  - g. Incident date;
  - h. Report or claim date;
  - i. Whether a crash is alleged;
  - j. Whether a fire is alleged;
  - k. Whether property damage is alleged;
  - l. Number of alleged injuries, if any; and
  - m. Number of alleged fatalities, if any.

Provide this information in Microsoft Access 2000, or a compatible format, entitled "REQUEST NUMBER TWO DATA."

4. Produce copies of all documents related to each item within the scope of Request No. 2. Organize the documents separately by category (i.e., consumer complaints, field reports, etc.) and describe the method GM used for organizing the documents.
5. State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by GM to date that relate to, or may relate to, the alleged defect in the subject vehicles: warranty claims; extended warranty claims; claims for good will services that were provided; field, zone, or similar adjustments and reimbursements; and warranty claims or repairs made in accordance with a procedure specified in a technical service bulletin or customer satisfaction campaign.

Separately, for each such claim, state the following information:

- a. GM's claim number;
- b. Vehicle owner or fleet name (and fleet contact person) and telephone number;
- c. VIN;
- d. Repair date;
- e. Vehicle mileage at time of repair;
- f. Repairing dealer's or facility's name, telephone number, city and state or ZIP code;
- g. Labor operation number;
- h. Problem code;
- i. Replacement part number(s) and description(s);
- j. Concern stated by customer; and
- k. Comment, if any, by dealer/technician relating to claim and/or repair.

Provide this information in Microsoft Access 2000, or a compatible format, entitled "WARRANTY DATA."

6. Describe in detail the search criteria used by GM to identify the claims identified in response to Request No. 5, including the labor operations, problem codes, part numbers and any other pertinent parameters used. Provide a list of all labor operations, labor operation descriptions, problem codes, and problem code descriptions applicable to the alleged defect in the subject vehicles. State, by make and model year, the terms of the new vehicle warranty coverage offered by GM on the subject vehicles (i.e., the number of months and mileage for which coverage is provided and the vehicle systems that are covered). Describe any extended warranty coverage option(s) that GM offered for the subject vehicles and state by option, model, and model year, the number of vehicles that are covered under each such extended warranty.
7. Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles, that GM has issued to any dealers, regional or zone offices, field offices, fleet purchasers, or other entities. This includes, but is not limited to, bulletins, advisories, informational documents, training documents, or other documents or communications, with the exception of standard shop manuals. Also include the latest draft copy of any communication that GM is planning to issue within the next 120 days.
8. Describe all assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and/or evaluations (collectively, "actions") that relate to, or may relate to, the alleged defect in the subject vehicles that have been conducted, are being conducted, are planned, or are being planned by, or for, GM. For each such action, provide the following information:
  - a. Action title or identifier;
  - b. The actual or planned start date;
  - c. The actual or expected end date;
  - d. Brief summary of the subject and objective of the action;
  - e. Engineering group(s)/supplier(s) responsible for designing and for conducting the action; and
  - f. A brief summary of the findings and/or conclusions resulting from the action.

For each action identified, provide copies of all documents related to the action, regardless of whether the documents are in interim, draft, or final form. Organize the documents chronologically by action.

9. Produce copies of all schematics and circuit diagrams for the subject components along with description and specifications of each component. Also, provide a technical description and component specifications for the "jumper harness" that is referenced in GM's Technical Service Bulletin No. 04-08-42-002, dated February 2004.
10. Describe all modifications or changes made by, or on behalf of, GM in the design, material composition, manufacture, quality control, supply, or installation of the subject components, from the start of production to date, which relate to, or may relate to, the alleged defect in the subject vehicles. For each such modification or change, provide the following information:
  - a. The date or approximate date on which the modification or change was incorporated into vehicle production;
  - b. A detailed description of the modification or change;
  - c. The reason(s) for the modification or change;
  - d. The part numbers (service and engineering) of the original component;
  - e. The part number (service and engineering) of the modified component;
  - f. Whether the original unmodified component was withdrawn from production and/or sale, and if so, when;
  - g. When the modified component was made available as a service component; and
  - h. Whether the modified component can be interchanged with earlier production components.

Also, provide the above information for any modification or change that GM is aware of which may be incorporated into vehicle production within the next 120 days.

11. State the number of each of the following that GM has sold that may be used in the subject vehicles by component name, part number (both service and engineering/production), model and model year of the vehicle in which it is used and month/year of sale (including the cut-off date for sales, if applicable):
  - a. Front turn signal lamps;
  - b. Rear turn signal lamps; and
  - c. Any kits that have been released, or developed, by GM for use in service repairs to the front and/or rear turn signal lamps.

For each component part number, provide the supplier's name, address, and appropriate point of contact (name, title, and telephone number). Also identify by make, model and model year, any other vehicles of which GM is aware that contain the identical component, whether installed in production or in service, and state the applicable dates of production or service usage.

12. Furnish GM's assessment of the alleged defect in the subject vehicles, including:

- a. The causal or contributory factor(s);
- b. The failure mechanism(s);
- c. The failure mode(s);
- d. The risk to motor vehicle safety that it poses;
- e. What warnings, if any, the operator and the other persons both inside and outside the vehicle would have that the alleged defect was occurring or subject component was malfunctioning; and
- f. The reports included with this inquiry.

This letter is being sent to GM pursuant to 49 U.S.C. § 30166, which authorizes NHTSA to conduct any investigation that may be necessary to enforce Chapter 301 of Title 49 and to request reports and the production of things. It constitutes a new request for information. GM's failure to respond promptly and fully to this letter could subject GM to civil penalties pursuant to 49 U.S.C. § 30165 or lead to an action for injunctive relief pursuant to 49 U.S.C. § 30163. (Other remedies and sanctions are available as well.) Please note that maximum civil penalties under 49 U.S.C. § 30165 have increased as a result of the recent enactment of the Transportation Recall Enhancement, Accountability, and Documentation (TREAD) Act, Public Law No. 106-414 (signed November 1, 2000). Section 5(a) of the TREAD Act, codified at 49 U.S.C. § 30165(b), provides for civil penalties of up to \$5,000 per day, with a maximum of \$15 million for a related series of violations, for failing or refusing to perform an act required under 49 U.S.C. § 30166. This includes failing to respond to ODI information requests.

If GM cannot respond to any specific request or subpart(s) thereof, please state the reason why it is unable to do so. If on the basis of attorney-client, attorney work product, or other privilege, GM does not submit one or more requested documents or items of information in response to this information request, GM must provide a privilege log identifying each document or item withheld, and stating the date, subject or title, the name and position of the person(s) from, and the person(s) to whom it was sent, and the name and position of any other recipient (to include all carbon copies or blind carbon copies), the nature of that information or material, and the basis for the claim of privilege and why that privilege applies.

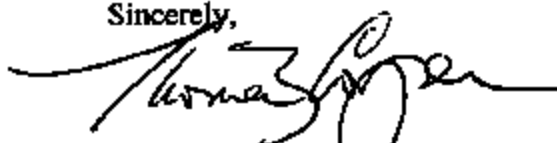
GM's response to this letter, in duplicate, together with a copy of any confidentiality request, must be submitted to this office by October 15, 2004. Please refer to PE04-061 in GM's response to this letter. If GM finds that it is unable to provide all of the information requested within the time allotted, GM must request an extension from me at (202) 366-5218 no later than five business days before the response due date. If GM is unable to provide all of the information requested by the original deadline, it must submit a partial response by the original deadline with whatever information GM then has available, even if an extension has been granted.

If GM claims that any of the information or documents provided in response to this information request constitute confidential commercial material within the meaning of 5 U.S.C. § 552(b)(4), or are protected from disclosure pursuant to 18 U.S.C. § 1905, GM must submit supporting information together with the materials that are the subject of the confidentiality request, in accordance with 49 CFR Part 512, as amended (69 Fed. Reg. 21409 et seq; April 21, 2004), to

the Office of Chief Counsel (NCC-113), National Highway Traffic Safety Administration, Room 5219, 400 Seventh Street, S.W., Washington, D.C. 20590. GM is required to submit two copies of the documents containing allegedly confidential information (except only one copy of blueprints) and one copy of the documents from which information claimed to be confidential has been deleted.

If you have any technical questions concerning this matter, please call Mr. Michael Lee of my staff at (202) 366-5236.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas Z. Cooper". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Thomas Z. Cooper, Chief  
Vehicle Integrity Division  
Office of Defects Investigation

Enclosures: 13 Vehicle Owner's Questionnaires (Reference Nos. 10086701, 10087522, 10086239, 10078615, 10078329, 10075135, 10068100, 10063993, 10041319, 10040964, 10030545, 10030230, and 10018187)